

REMARKS

Preliminary Remarks:

Claims 1 to 22 are pending of which claim 1 is independent. Claim 1 is amended to incorporate some of the limitations of claim 5, which is also amended. No new matter is added.

Applicants respectfully request entry of this Amendment under 37 C.F.R. § 1.116 in that it places the claims in better form for allowance or for consideration on appeal. Further, the amendments to the claims cannot raise new issues that require a new search because the Examiner has already searched the full scope of claims 1 and 5.

Claim Rejections:

Rejections under 35 U.S.C. § 103

Claims 1 to 9 and 13 to 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Krallmann *et al.* (CA 2,292,983) in view of Smith (EP 0 190 630). Applicants respectfully traverse.

As amended, claims 1 to 9 and 13 to 22 are directed to casing that comprise, *inter alia*, an antimicrobial constituent is combined with propanediol and a viscosity increasing component or an oil emulsion. As the Examiner correctly sets forth in the final Office Action, Krallmann *et al.* teach ready-to-fill plastic sausage casings. However, Krallmann *et al.* are silent about using an antimicrobial constituent combined with propanediol (and indeed also silent about using glycerol – claim 5). Furthermore, propanediol would not be effective in the casings disclosed by Krallmann *et al.*

The casings in Krallmann *et al.* are multilayered and have a polyamide-based layer both on the inside and on the outside. The outer layer contains a spraying medium in an amount corresponding to the saturation limit of the outer layer. The spraying medium preferably comprises water, which optionally contains a “conventional fungicide” (such as quaternary ammonium chloride compounds). Quaternary ammonium compounds bind to the carboxylate end-groups of polyamides via ionic bonds. In other words, once bound, these compounds are unable to migrate into a polyamide layer, *i.e.*, to the inner layer. Instead, they remain entirely on the outer surface of the casing.

As claimed, the antimicrobial constituent combined with propanediol is applied to the inner or to the inner and outer surface of the casing. In other words, not only does Krallmann *et al.* not teach using propanediol, one of ordinary skill in the art would read Krallmann *et al.* as only teaching application of antimicrobial compounds to the outer surface. Nothing in Krallmann *et al.* would lead one of ordinary skill in the art to apply the antimicrobial constituent combined with propanediol to the inner or to the inner and outer surface of the casing.

Smith teaches a ready-to-fill tubular food casings based on regenerated cellulose which contain at least 40% by weight of water, based on the dry weight of the casings. In order to prevent the growth of molds, yeasts, and other microorganisms, Smith teaches adding high pH-active antimycotics, such as C₁ to C₇ alkyl esters of para-hydroxy-benzoic acid (PHB) esters. Smith at page 13. This antimycotic agent is effective in a pH-range of from 5 to 9, *i.e.*, at a relatively high pH, which tends to rise with time due to the reactivity of the hydroxyl groups in the cellulose from which the casings are made. *Id.* at page 14. One of ordinary skill in the art would not consider C₁ to C₇ PHB esters as “conventional” agents for preventing microorganism growth in plastic casings.

While Smith discloses polyol plasticizers such as glycerin and propylene glycol, one of ordinary skill in the art would not read Smith as disclosing a polyamide-based casing impregnated with PHB esters and propanediol. Furthermore, even if, *arguendo*, one of ordinary skill in the art combined Krallmann *et al.* with Smith, the result would be, at best a combination of a “conventional” fungicide (such as a quaternary ammonium chloride compound), and a PHB ester, and propanediol. One of ordinary skill in the art would not substitute the “conventional” fungicide of Krallmann *et al.* with the PHB ester of Smith because, as mentioned previously, one of ordinary skill in the art would not consider PHB esters as “conventional”. In addition, if one of ordinary skill in the art combined Krallmann *et al.* with Smith, the resulting mixture would be applied only to the outer surface of the casing, not to the inner or to the inner and outer surface of the casing.

In conclusion, Applicants respectfully submit that claims 1 to 9 and 13 to 22 are not unpatentable over Krallmann *et al.* in view of Smith and respectfully request withdrawal of this rejection.

Claims 10, 11 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Krallmann *et al.* in view of Smith in further view of Quinones *et al.* (U.S. Pat. No. 6,183,826). Applicants respectfully traverse.

Applicants have discussed Krallmann *et al.* and Smith, *supra*. Quinones *et al.* also do not disclose PHB esters as antimycotics and is likewise silent about propanediol. Quinones *et al.* do mention that the tubular casing can be shirred and further that during the shirring operation a so-called shirring solution may be sprayed onto the inner surface. This shirring solution may contain an anti-pleat lock agent, a lubricant, a surfactant, water, and/or a humectant. Once again, there is no disclosure that an antimycotic agent could be applied to the inner surface during the shirring step. Therefore, Quinones *et al.* does not cure the deficiencies of Krallmann *et al.* and Smith and Applicants respectfully submit that claims 10, 11 and 12 are not unpatentable over Krallmann *et al.* in view of Smith and in further view of Quinones *et al.*

CONCLUSION

In view of the amendments and remarks above, Applicants respectfully submit that this application is in condition for allowance and request favorable action thereon. The Examiner is invited to contact the undersigned if any additional information is required.

As this response is filed within the shortened statutory period for reply, Applicants believe that no fee is due. If any fees are required, they may be charged to Deposit Account No. 50-4254, referencing Attorney Docket No. 2901886-000022.

Respectfully submitted,

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